COASTAL PLAIN DEPRESSION SWAMP (CYPRESS DOME SUBTYPE)

Concept: Coastal Plain Depression Swamps are depressional wetlands with a well-developed, closed or nearly closed tree canopy of *Taxodium ascendens* or *Nyssa biflora* but without a dense graminoid-dominated herb layer. The Cypress Dome Subtype is a deeper, more pond-like community than the other subtypes, associated with steep-sided basins. It is a more southern community that reaches its northern range limit in southeasternmost North Carolina. Farther south it occurs in a variety of settings, but in North Carolina it is largely confined to a few steep-sided limesinks.

Distinguishing Features: The Cypress Dome Subtype is distinguished from other communities by having a well-developed canopy of *Taxodium ascendens* in a depressional wetland, without a well-developed herb layer. *Ilex myrtifolia* is usually the predominant shrub. Some aquatic plants such as *Nymphaea odorata* may be present. The Mixed Subtype and Pocosin Subtype are generally dominated by *Nyssa biflora* and have well-developed shrub layers of different species. Some *Taxodium* may be present on the edge or in the interior of Small Depression Drawdown Meadow or Small Depression Pond communities, as well as in Small Depression Shrub Borders, but Coastal Plain Depression Swamp should not be recognized unless the canopy is near complete and covers a large area or fills the basin.

Synonyms: Synonyms: *Taxodium ascendens / Ilex myrtifolia* Depression Forest (CEGL007418). Small Depression Pond (3rd Approximation).
Ecological Systems: Southern Atlantic Coastal Plain Depression Pondshore (CES203.262). Southern Atlantic Coastal Plain Depression Pondshore (CES203.262).

Sites: The Cypress Dome Subtype, at least in North Carolina, occurs primarily or exclusively in limesink depressions.

Soils: Soils are mineral soils with a shallow muck layer. They are generally treated as inclusions or mapped as water in soil surveys.

Hydrology: The Cypress Dome Subtype is flooded for long periods, often with water several feet deep. In the wettest parts, the bottom may only infrequently be exposed.

Vegetation: The Cypress Dome Subtype has a dense or open canopy usually dominated by *Taxodium ascendens*. *Nyssa biflora* may be present in patches. Usually no other trees are present except on the edge. Shrubs may be fairly dense on the edge but otherwise are sparse. *Ilex myrtifolia, Cyrilla racemiflora,* and *Ilex cassine* are most frequent. The water may be permanent enough to support *Nymphaea odorata* in the deepest parts, and floating plants such as *Lemna* spp. or *Utricularia* spp. may be present. *Hymenachne hemitomon, Eleocharis tricostata, Anchistea virginica*, or other herbs may be present on the edge.

Range and Abundance: Ranked G3. This subtype is the quite rare in North Carolina, with only a handful of examples known in the southeastern corner of the state. The synonymized association ranges to Mississippi or Louisiana, and it is apparently more abundant in Florida.

Associations and Patterns: The Cypress Dome Subtype may fill the entire basin but in at least one example it occupies half a basin with open water in the other half. A few examples have recognizable Small Depression Shrub Border communities around their outer edge.

Variation: No variants are known.

Dynamics: The Cypress Dome Subtype may be more stable than most other Coastal Plain Depression Communities. The wetness, limited shrub cover, and sloping basins of our examples make fire unlikely to penetrate them, even during drought. However, fire may be important on the shallower edges. Descriptions of cypress domes in Florida say that fire penetrates them at times, creating a gradient of fire frequency from the shallow edges to the center.

Water levels may fluctuate drastically over the course of a year or among years. Rare periods of low water are crucial to regeneration of the *Taxodium*, whose seedlings cannot tolerate complete submergence.

The ecological factors that distinguish the Cypress Dome Subtype from Small Depression Pond are not clear. Their hydroperiods appear to overlap. It may be that rare episodes of tree regeneration or rare tree-killing disturbances create persistent treed or treeless vegetation. However, examples of one community definitively turning into the other are not documented. It may alternatively be that subtle differences in hydroperiod or fire susceptibility created by basin slope and water table elevation determine which community occurs.

Comments: This subtype is named by analogy to the cypress dome swamps of Florida and the Gulf Coast. It does not appear, however, that our examples generally have the dome-shaped appearance of those farther south.

Rare species: Rare plants associated with Small Depression Drawdown Meadow or Small Depression Ponds may occasionally occur in the Cypress Dome Subtype but are less likely to.

References: